

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A method of sensing and indicating permanent state deviations via detection of temporary inner material oscillations, so-called acoustic emission, in real time in parts of importance for hardware design and construction, within existing production equipment, e.g., machinery, and/or monitoring of previously built-up infrastructure, ~~characterised~~ characterized in that one or more at least approximately 20 μm thick amorphous or nanocrystalline, magnetically heat-treated band elements with high permeability and relatively high magnetostriction are applied in freely suspended manner to a pertinent part, each respective band element being at least partly surrounded by multi-turn coils, of which either the band elements or the coils or both are set in a ~~magnetised~~ magnetized basic or initial state, such atomic movements (oscillations) which occur in any optional such state deviation being transferred to the respective band elements, the deviation either giving rise to a clearly measurable and detectable magnetic flow change (dB/dt) in the respective coil in proportion in said atomic movements, or a similarly measurable and detectable inductance change in the respective coil.

Claim 2 (Currently amended): An apparatus for sensing and indicating permanent state deviations via detection of temporary inner material oscillations, so-called acoustic emission, in real time in parts of importance for hardware design and construction, within existing production equipment, e.g. machinery, and/or monitoring of previously built-up infrastructure, ~~characterised~~ characterized in that it comprises one or more at least approximately 20 μm thick amorphous or nanocrystalline, magnetically heat-treated band elements of high permeability and relatively high magnetostriction, which band element/elements being freely suspended and surrounded by multi-turn coils of which either the band elements or the coils or both, are set in a ~~magnetised~~ magnetized basic or initial state, such atomic movements (oscillations) as occur in any optional such state deviation, in connection with being transferred to the band element/elements, either giving rise to a clearly measurable and detectable magnetic flow change (dB/dt) in the respective coil in proportion to the atomic movements, or a similarly measurable and detectable inductance change in the respective coil.

Claim 3 (Currently amended): The apparatus as claimed in ~~Claim~~ claim 2, ~~characterised~~ characterized in that the band element/elements with associated coil/coils are enclosed in an elastically deformable epoxy polymer.

Claim 4 (Currently amended): The apparatus as claimed in ~~Claim 2 or 3,~~
~~characterised~~ claim 2, characterized in that the band element/elements and the
coil/coils are glued to the object whose permanent state deviations are to be
indicated.

Claim 5 (Currently amended): The apparatus as claimed in ~~any of Claims 2~~
~~to 4, characterised~~ claim 2, characterized in that the sensitivity thereof is different
depending upon the orientation of the detection direction in relation to the rolling
direction of the band element/elements, as a consequence of directional dependent
properties in the material.

Claim 6 (Currently amended): The apparatus as claimed in ~~any of Claims 2~~
~~to 5, characterised~~ claim 2, characterized in that the band elements with
associated coils are bridge- and amplifier connected in order to increase sensitivity
and detectability, respectively.

Claim 7 (Currently amended): The apparatus as claimed in ~~any of Claims 2~~
~~to 6, characterised~~ claim 2, characterized in that it is ~~realised~~ realized as a glass
breakage indicator.